CLAIMS:

1. A method for preparing a soft magnetic thin film of a cobalt and iron-based alloy, comprising the steps of:

furnishing a plating tank including a cathode compartment and an anode compartment which are separated by a diaphragm or salt bridge so as to permit charge transfer, but inhibit penetration of iron ions, the cathode compartment receiving a plating solution containing cobalt ions and divalent iron ions, and the anode compartment receiving an electrolyte solution,

immersing a workpiece in the plating solution,

immersing an anode in the electrolyte solution,

effecting electroplating to form a film on the workpiece, and

heat treating the film at a temperature of 100 to 550°C.

2. A method for preparing a soft magnetic thin film of a cobalt and iron-based alloy, comprising the steps of:

immersing a workpiece and a soluble anode in a plating solution containing cobalt ions and divalent iron ions,

effecting electroplating to form a film on the workpiece, and

heat treating the film at a temperature of 100 to 550°C.

3. The method of claim 1 wherein the electroplating is effected by conducting pulse current.

4. The method of claim 1 wherein the soft magnetic thin film contains 5 to 70 at% of cobalt and 30 to 95 at% of iron.

5. The method of claim 1 wherein the soft magnetic thin film has a saturation flux density of at least 2.0 T.

6. A soft magnetic thin film prepared by the method of claim 1.